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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,428	12/06/2001	Katsuji Hattori	OGOH : 071A	6273

7590 10/04/2002

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EXAMINER
CHUNG, DAVID Y

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

A6

Office Action Summary	Application No.	Applicant(s)	
	10/003,428	HATTORI ET AL.	
	Examiner	Art Unit	
	David Chung	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-11 and 33-49* is/are pending in the application.

4a) Of the above claim(s) *1-3,5-11 and 41-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *33-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. *09/806,230* .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 39, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 33 and 34 rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (U.S. 6,078,375). Matsumoto et al. discloses a wide viewing angle IPS mode liquid crystal display having two alignment films which are subjected to individual aligning treatments. The aligning treatments are carried out in the same directional orientation to put the liquid crystal molecules in a state of splay alignment. Since the alignment layers in figure 2 are oriented via a rubbing treatment, their thickness is inherently non-uniform and their surfaces inherently have an irregular configuration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. 6,078,375). Matsumoto et al. discloses a wide viewing angle IPS mode liquid crystal display having two alignment films which are subjected to individual aligning treatments. The aligning treatments are carried out in the same directional orientation to put the liquid crystal molecules in a state of splay alignment. Since the alignment layers in figure 2 are oriented via a rubbing treatment, their thickness is inherently non-

uniform and their surfaces inherently have an irregular configuration. Although Matsumoto et al. does not disclose forming the alignment layers by letterpress printing, letterpress printing was a conventional technique for applying an alignment film to a substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to form the alignment layer of Matsumoto et al. by letterpress printing because it was conventional.

Claim 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. 6,078,375). Matsumoto et al. discloses a wide viewing angle IPS mode liquid crystal display having two alignment films which are subjected to individual aligning treatments. The aligning treatments are carried out in the same directional orientation to put the liquid crystal molecules in a state of splay alignment. Since the alignment layers in figure 2 are oriented via a rubbing treatment, their thickness is inherently non-uniform and their surfaces inherently have an irregular configuration. Although Matsumoto et al. does not disclose a reflective substrate with a reflecting surface of irregular configuration, reflective displays were well known and obvious for having light recycling capabilities and enhanced brightness. Therefore, it would have been obvious to one or ordinary skill in the art at the time of invention to form a reflecting surface on at least one substrate in order to enhance the brightness of the display.

Claim 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al. (U.S. 6,078,375). Matsumoto et al. discloses a wide viewing angle IPS mode liquid

crystal display having two alignment films which are subjected to individual aligning treatments. The aligning treatments are carried out in the same directional orientation to put the liquid crystal molecules in a state of splay alignment. Since the alignment layers in figure 2 are oriented via a rubbing treatment, their thickness is inherently non-uniform and their surfaces inherently have an irregular configuration. Although Matsumoto et al. does not disclose a flattening film with irregular configuration, this feature was well known and obvious for compensating for viewing angle dependence as evidenced by the disclosure of Van Aerle (U.S. 5,808,717). Therefore, it would have been obvious to one or ordinary skill in the art at the time of invention to form a flattening film with irregular configuration in order to improve viewing angle characteristics.

Claim 38 rejected under 35 U.S.C. 102(b) as being unpatentable over Okamoto et al. (U.S. 5,825,445). Okamoto et al. discloses a conventional OCB mode liquid crystal display in figures 2a, 2b, and 2c. The alignment films in this device were typically oriented by a rubbing treatment, which would have caused the thickness of the alignment layers to become non-uniform and the surfaces to have an irregular configuration. Okamoto et al. discloses that when no voltage is applied to the electrodes, the liquid crystal layer presents a splay alignment as shown in figure 2a. When a voltage is applied, the liquid crystal layer takes a bend alignment as shown in figures 2b and 2c. See column 1, lines 36 – 55.

Claim 39 rejected under 35 U.S.C. 102(b) as being unpatentable over Okamoto et al. (U.S. 5,825,445) in further view of Koike et al. (U.S. 5,473,455). Okamoto et al. discloses a conventional OCB mode liquid crystal display in figures 2a, 2b, and 2c. The alignment films in this device were typically oriented by a rubbing treatment, which would have caused the thickness of the alignment layers to become non-uniform and the surfaces to have an irregular configuration. Okamoto et al. discloses that when no voltage is applied to the electrodes, the liquid crystal layer presents a splay alignment as shown in figure 2a. When a voltage is applied, the liquid crystal layer takes a bend alignment as shown in figures 2b and 2c. See column 1, lines 36 – 55. Although Okamoto et al. does not disclose forming the irregular configurations by an ozone asher treatment, Koike discloses that treating the surface of the alignment layer with an ozone asher treatment results in a larger pretilt angle. See column 14, line 55 – column 15, line 19. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to treat the alignment layer of the conventional display of Okamoto et al. with an ozone asher treatment in order to obtain a larger pretilt angle.

Claim 40 rejected under 35 U.S.C. 102(b) as being unpatentable over Okamoto et al. (U.S. 5,825,445) in further view of Mishina et al. (U.S. 5,954,999). Okamoto et al. discloses a conventional OCB mode liquid crystal display in figures 2a, 2b, and 2c. The alignment films in this device were typically oriented by a rubbing treatment, which would have caused the thickness of the alignment layers to become non-uniform and the surfaces to have an irregular configuration. Okamoto et al. discloses that when no

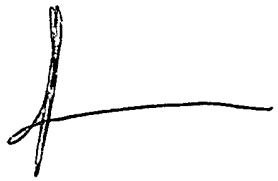
voltage is applied to the electrodes, the liquid crystal layer presents a splay alignment as shown in figure 2a. When a voltage is applied, the liquid crystal layer takes a bend alignment as shown in figures 2b and 2c. See column 1, lines 36 – 55. Although Okamoto et al. does not disclose the method of forming the alignment layer for the conventional device, the method of this claim was well known and obvious to those of ordinary skill in the art as evidenced by the disclosure of Mishina et al. (U.S. 5,954,999). Mishina et al. discloses a conventional method for obtaining an alignment layer. See column 1, line 66 – column 2, line 8. Mishina et al. discloses that the polyimide of powder form can be dissolved in a solvent to form the material for the alignment film. See column 7, lines 15 – 25. Therefore, it would have been obvious to those of ordinary skill in the art at the time of invention to form the alignment film in the conventional display of Okamoto et al. using the method claimed by applicant because it was conventional.

Response to Arguments

Applicant's arguments filed September 11, 2002 regarding the election of species requirement have been fully considered but they are not persuasive. Examiner maintains that the subject matter of groups I-III is distinct enough and constitutes enough of a burden on the examiner to require an election of species. The election of species requirement is maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.



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